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request for a new session, the base station comprising:

means for making an estimate of a new system FER which will result should the new session be admitted; and

means for deciding to admit or to deny the new session on the basis of the new system FER estimate.

16. (Amended) A base station controller operable to perform a call admission control upon receipt of a request for a new session, the base station controller comprising:

al amd.

means for making an estimate of a new system FER which will result should the new session be admitted; and

means for deciding to admit or to deny the new session on the basis of the new system FER estimate.

REMARKS

The Examiner's indication that claims 5 to 9 and 11 to 13 are allowable if re-written in independent form including all the limitations of the base claim and any intervening claims is appreciated. However, in view of applicant's discussion below of the rejected claims, it is respectfully submitted that it will not be necessary to make this amendment in order to put them in allowable form.

Claim Amendments

Claims 14, 15 and 16 have been re-written in independent form and claim 17 has been cancelled. No other amendments have been made.

35 U.S.C. 112 Claim Rejections

In paragraph 2 of the detailed action the Examiner has rejected claim 14 under 35 U.S.C. 112 first paragraph. The Examiner argues that the specification does not provide sufficient details to enable skilled person in the art to make and use the invention because it does not adequately describe how to implement FER estimates into a MAC layer device. With respect, the Examiner is referred to the discussion appearing on page 9, line 15 through to page 10, line 23 where a detailed method of calculating the frame error rate is provided. The MAC layer is a well understood aspect of a communication device, and a person skilled in the art would certainly understand how to implement the method described on pages 9 and 10 in the MAC layer of a device. A MAC layer can certainly be made aware of frame error rate information, and with respect it is submitted that it is not necessary to provide details of how this is conveyed to the MAC layer. This would be analogous to requiring a detailed circuit implementation and code every time any patent specification referred to the frame error rate and with respect, applicant submits that one skilled in the art would understand that this is not necessary. The Examiner is respectfully requested to withdraw the rejection of claim 14 under 35 U.S.C. 112 as set out in paragraph 2 of the detailed action.

In paragraph 4 of the detailed action, the Examiner has rejected claims 14, 15 and 16 under 35 U.S.C. 112 second paragraph. Claims 14, 15 and 16 have been re-written in independent form to clearly delimit the items being claimed in the preamble. As such, the Examiner is respectfully requested to withdraw this rejection.

35 U.S.C. 102 Claim Rejections

In paragraph 6 of the detailed action, the Examiner has rejected claim 17 under 35 U.S.C. 102(e) as being anticipated by Chuah. In the interest of expediting prosecution, claim 17 has been cancelled rendering this rejection moot. Applicant is not conceding however that claim 17 was in fact anticipated by the cited reference.

35 U.S.C. 103 Claim Rejections

In paragraph 8 of the detailed action, the Examiner has rejected claims 1 to 4, 10 and 19 to 20 under 35 U.S.C. 103(a) as being unpatentable over Scholefield in view of Beming.

Respecting claim 1, the Examiner argues that Scholefield teaches all claim limitations of a method and computer code of performing call admission control upon receipt of a request for a new session. In particular, the Examiner argues that Scholefield teaches making an estimate of a new system QoS which will result should a new session be admitted. With respect, applicant respectfully submits that the Examiner's interpretation of Scholefield et al is not accurate. Scholefield does indeed teach a call admission control system/method. However, the determination of the amount of bandwidth that a call will require, and then the examination of the existing bandwidth to determine if the required bandwidth can be accommodated, is not the same as making an estimate of a new system QoS that will result if the new session is admitted. For example, suppose there are existing connections having a bandwidth totalling 80 Mbps, on a channel having a capacity of 100 Mbps, and a request comes in to add a connection having a capacity of 15 Mbps. Using the method taught in Scholefield, the resulting capacity after adding the new connection will be 95 Mbps and as such the call would be admitted. No consideration is made as to what the new system quality of service might be. Quality of service

is some measure of quality associated with a signal. Simply determining a bandwidth occupied by a service has nothing to do with quality of service.

Applicant's claim 1 recites making an estimate of a new system frame error rate which will result should a new session be admitted. As can be appreciated from applicant's description, this is not an easy task and does not equate whatsoever with the simple adding of an expected bandwidth to an existing bandwidth to determine a new total bandwidth. Thus, with respect, it is submitted Scholefield does not teach making an estimate of a new system QoS. The Examiner has acknowledged that Scholefield does not teach using frame error rate as a QoS determiner. However, as indicated above, applicant submits that Scholefield does not teach using a QoS at all in performing call admission.

Beming does teach using a frame error rate as a QoS determiner. Applicant has not claimed this to be an invention per se. Furthermore, whether or not the frame error rate is used as a QoS determiner in Beming is irrelevant given that Scholefield does not teach performing call admission as a function of a QoS. Beming also teaches using the frame error rate in a different manner. In particular, calls are admitted or denied as a function of a current frame error rate (see column 6, lines 45 to 54) and there is no predictive function that is implemented to obtain an expected new system frame error rate which would result should the new system be admitted.

Thus neither of the steps in claim 1 are in fact taught in either of the cited references. There is no step of making an estimate of a new system FER which will result should the new session be admitted, and there is no deciding to admit or to deny the new session on the basis of the new system FER estimate.

Turning now to the three criteria for the establishment of a *Prima Facie* case of obviousness, the first criteria requires that all of the claim limitations be present in the reference or references when combined. Applicant's claim 1 includes two method steps neither of which, as discussed above, appear in either of the references cited. Thus the first criteria for establishing a *Prima Facie* case of obviousness fails.

The second criteria requires that an expectation of success be present for combining the two references and coming up with the claimed invention. Here one would be lead to consider what would be the result of combing Beming et al with Scholefield. Scholefield teaches admitting calls as a function of available bandwidth while Beming et al teaches admitting calls has a function of frame error rates (note these are not system frame error rates as claimed in claim 1 either). Combing these two methods would result in a system in which calls are admitted only in the event the bandwidth is available and the current frame error rates are acceptable. There is nothing in the combination of references which would teach any method of predicting a system frame error rate, or suggesting that such a predicted frame error rate would then be used in place of available bandwidth to perform a call admission. Thus, clearly the second criteria for a *Prima Facie* case of obviousness fails.

On the basis of the fact that the Examiner has failed to satisfy the three criteria for establishing a *Prima Facie* case of obviousness, the Examiner is respectfully requested to withdraw the rejection of claim 1 under 35 U.S.C. 103(a).

Turning now to claim 2, recited is a very specific manner of coming up with an estimate of a new system frame error rate. Once again, applicant respectfully refutes the Examiner's analogy between bandwidth and system QoS. These are completely different

concepts. The Examiner argues that determining an effective bandwidth of a new service request is analogous to determining the estimate of a degradation in the system should the new system be admitted (see the top of page 5 of the detailed action). This is not correct. There are many situations where adding bandwidth to the system will not degrade system performance whatsoever, and there are an equally large number of situations where adding bandwidth which does not exceed the system capacity will still result in a degradation in the quality of service. These are simply completely non-analogous operations.

Claims 3, 4 and 10 further define the frame error rate mechanism, and of course none of this is taught in either of the cited references. Similar arguments apply to claims 19 and 20. As such, the Examiner is respectfully requested to withdraw the rejection of claims 1 to 4, 10 and 19 to 20 as set out in paragraph 8 of the detailed action.

In paragraph 9 of the detailed action, the Examiner has rejected claims 15, 16 and 18 under 35 U.S.C. 103(a) as being unpatentable over Beming in view of Scholefield.

Claims 15 and 16 have been re-written in independent form but include all of the limitations of claim 1, and as such claims 15 and 16 should be patentable with reasons set out above in the discussion of claim 1. Regarding claim 18, this is an apparatus claim again, which is very similar in scope to claim 1 and includes a processing element operable to make the above discussed frame error rate estimate of a new system FER, and to decide whether or not to admit a new session on the basis of the new FER estimate. As discussed above respecting claim 1, this functionality is sufficient to patentably distinguish claim 18 over the cited references. The Examiner's rejection as set out in paragraph 9 of the detailed action does not add anything to that presented in paragraph 8 of the detailed action.

As such, the Examiner is respectfully requested to withdraw the rejection of claims 15, 16 and 18 as set out in paragraph 9 of the detailed action.

Applicant respectfully submits that all of the objections and rejections raised by the Examiner have been addressed. As such, favourable consideration and allowance of the application is respectfully requested. However, in the event there are further issues that require resolution, the Examiner is respectfully requested to contact the undersigned at (613) 232-2486 ext 323 in order to resolve them.

Respectfully submitted,

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By _____

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1 (changes)

RAB:rld
Attorney Docket No.: 77682-130

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Cancel claim 17 and amend claims 14, 15 and 16 as follows:

14. (Amended) A MAC (media access control) layer implementation device operable to [execute a method according to claim 1.] perform call admission control upon receipt of a request for a new session, the device comprising:

means for making an estimate of a new system FER which will result should the new session be admitted; and

means for deciding to admit or to deny the new session on the basis of the new system FER estimate.

15. (Amended) A base station operable to [execute a method according to claim 1.] perform a call admission control upon receipt of a request for a new session, the base station comprising:

means for making an estimate of a new system FER which will result should the new session be admitted; and

means for deciding to admit or to deny the new session on the basis of the new system FER estimate.

16. (Amended) A base station controller operable to [execute a method according to claim 1.] perform a call admission control upon receipt of a request for a new session, the base station controller comprising:

2 (changes)

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means for making an estimate of a new system FER which will result should the new session be admitted; and

means for deciding to admit or to deny the new session on the basis of the new system FER estimate.